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| Performance Objectives And Instructional Cues | OUTLINE AND PRESENTATION |
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LESSON PLAN

INTRODUCTION

A. Course Title: Basic Nutrition for Law Enforcement

Instructional Goal:

1. This course is designed to instruct students in the basic elements of proper nutrition.
2. This course will teach students the basic guidelines for healthy eating as defined by the American Dietetic Association.
3. This class will instruct students on meal planning to meet the physical output demands of a law enforcement academy.

Instructional objectives:

At the conclusion of the class, students will be able to:

1. Identify at least three basic nutrients maintaining optimal health.
2. Identify the purpose of the Food Pyramid.
3. Identify one food that illustrates all elements of the Food Pyramid.
4. Identify the dietary goals that have been established to promote healthy eating habits.
5. Identify the calories that are provided by the macronutrients, and what constitutes a serving size.
6. Identify proper method for timing meals and why timing is essential
7. Identify commonly used nutritional ergogenic aids, their effects, safety, and any drawbacks.
8. Identify the drawback of caffeine and alcohol.

Instructional Methods:

Class lecture with class participation, overheads, and audio visual aids

Estimated Time: 1 hour

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BIBLIOGRAPHY

American Dietetic Association and Canadian Dietetic Association
1993. Position of the ADA and the CDA. Nutrition for physical fitness
and athletic performance for adults. Journal of the American Dietetic
Association 93:691-696.

Smith, Nathan J., M.d. and Worthington-Roberts, Bonnie PhD..1990.
Food for Sport. Bull Publishing Company, Palo Alto, California.

Williams, Melvin H., 1999. Nutrition for Heal, Fitness and Sport.
WCB/McGraw Hill, New York.

Williams, Melvin H., 1997. The Ergogenics Edge. Human Kinetics,
Champaign IL.

Instructor: _____ Presentation Date: _____

Prepared by: _____ Date: _____

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Revised/Reviewed: NMLEA INSTR

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| | <p>LESSON PLAN</p> <p>I. Nutrition</p> <p>A. Why we are teaching this class</p> <ol style="list-style-type: none"> 1. Food is more than just fuel that stops your hunger. Food contains nutrients essential for maintaining optimal health and top performance. <p>B. What you will experience</p> <ol style="list-style-type: none"> 1. Increased physical demands – physical training, defensive tactics training, etc. 2. Increased stress - to perform, to do well on tests, etc. 3. Decreased sleep and rest 4. Compromised immune system – all of the things listed add up to one thing – a decreased ability to fight off infections. That is why eating properly is so important. You need nutrition to gain the essential nutrients that will help you fuel your body through the demands that will be placed on you during the academy. <p>C. A Word to the Wise</p> <ol style="list-style-type: none"> 1. Now is not the time to go on a diet. - Those of you who are concerned about being overweight should not worry at this point. You will lose weight because of the increased demands put on your body during the academy. If you do not eat enough of a proper diet, you could experience: <ol style="list-style-type: none"> a) a diminished ability to cope with stress b) chronic fatigue c) an inability to concentrate d) increased susceptibility to minor illnesses such as colds. <p>II. Basic Nutrients for Health</p> <p>A. There are six nutrients that are essential for maintaining optimal health.</p> |

OH 1

OH 2

OH 3

LO 1

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| | <ol style="list-style-type: none"> 1. Carbohydrates – Carbohydrates are the primary energy source when you are exercising. Carbohydrates come from fruits, vegetables, breads and grains. This source fuels your muscles and brain. In fact, carbohydrates are the brain's main source of energy. There are two types of carbohydrates, Simple Carbohydrates – which are generally sugar and Complex Carbohydrates , from whole grain products, fruits and vegetables. Sixty (60%) percent of your diet should come from complex carbohydrates. 2. Fat - Fat is a source of stored energy (calories) that is burned mostly during low-level activity and long-term aerobic activities lasting more than 40 minutes. Animal fats such as butter, lard, fat in meat and cheese, tend to be saturated and contribute to heart disease and some cancers. Vegetable fats such as corn oil, olive oil, and oil found in nuts) are generally unsaturated and less harmful. You should limit your fat intake to about 25 percent of your total calories. 3. Protein – Protein is essential for building and repairing muscles, red blood cells, hair and other tissues, and for synthesizing hormones. Protein from food is digested into amino acids, which are then rebuilt into protein in muscles and other tissues. Protein is a source of calories and can be used for energy if inadequate carbohydrates are available (i.e., during exhaustive exercise). About 15 percent of your calories should come from protein-rich foods such as fish, poultry, meats, soy products, and beans. 4. Vitamins – Vitamins are metabolic catalysts that regulate chemical reactions within the body. They include vitamins A, B complex, C, D, E, and K. Most vitamins are chemical substances that the body does not manufacture, so you must obtain them through your diet. Vitamins are NOT a source of energy. 5. Minerals – Minerals are elements obtained from food that combine to form structures of the body (for example, calcium in bones) and regulate body processes such as iron in red blood cells transports oxygen. Minerals include calcium, iron, magnesium, phosphorous, sodium, potassium, chromium, and zinc. Minerals do no provide energy. |

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| OH 4 OH 5 LO 2 | 6. Water – Water is an essential substance that makes up about 60 to 75 percent of your weight. Water stabilizes body temperature, carries nutrients to and waste away from cells, and is needed for cells to function. Water does not provide energy. |
| LO 3 | III. Food Pyramid A. Definition: The Food pyramid is a basic guideline for a balanced diet. 1. Ask cadets if they have seen the pyramid before and where. 2. The pyramid illustrates which foods you need to eat more of. For example, the largest part of the pyramid is bread, grains and cereals - these are carbohydrates. 3. The Food Pyramid is not unrealistic. If you really look at the pyramid, what type of food might it illustrate? (Elicit ideas from cadets) Example: A Hamburger – you have a bun (preferably whole-wheat) lots of green chili, tomatoes, onions, lettuce, pickles, etc., and <u>lean</u> piece of meat, you can even include a slice of cheese. But be very sparing with the fat – things like mayonnaise, bacon, and that extra order of French fries. <i>Another example might be a pizza.</i> |
| OH 6 OH 7 | B. What is a serving size? - The Food Pyramid suggests that you eat 6-11 servings of bread, cereals, and grains. It also suggests that you eat 3 to 5 servings of vegetables. Sounds like a lot? The reality is that serving sizes are moderate (go over serving size list). Six to 11 servings of grain is only 2 to 4 servings per meal, or the equivalent of about 150 to 300 calories – not much for hungry exercisers who require about 600 to 900 calories per meal. REMEMBER - The Food Pyramid is a basic guideline. In other words, it is the <u>MINIMUM</u> amount you should be eating of each food category. |
| OH 8 LO 4 | IV. Dietary Goals A. Review current U.S. Diet – what Americans eat now. This is the reason for obesity. Approximately 50% of Americans are seriously overweight. Fat 37% Protein 12% Complex Carbohydrate 26% Sugar (simple carbohydrates) 26% |

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| OH 9 LO 5 | <p>B. Review Recommended Diet – This is the optimal guideline for active people. Fat 25% Protein 15% Complex Carbohydrates 50% Sugar (simple carbohydrate) 10%</p> <p>V. Calories</p> <p>A. Carbohydrates contain 4 calories per gram. However, when you eat a COMPLEX carbohydrate, your body actually absorbs a little more than two calories per gram. This is because your body uses just a little more than a calorie to break down the carbohydrate in your system. SIMPLE carbohydrates – basically sugar contain 4 calories per gram – which are generally empty calories.</p> <p>B. Protein contains 4 calories per gram.</p> <p>C. Fat contains 9 calories per gram. There is no processing needed and unless it is used immediately by the body, it is ready to go to your left hip.</p> <p>D. Alcohol - Contains 7 calories per gram.</p> |
| OH 10 LO 6 | <p>VI. Timing Your Meals</p> <p>A. Timing is important</p> <ol style="list-style-type: none"> 1. Typical Food Intake - A person's metabolic rate has two peaks during the day – one around midmorning and another around mid afternoon. The lowest activity levels usually occur early in the morning and late in the afternoon. (Please note, this applies to whatever your morning is – even if you work graveyard). Many people skip breakfast, grab a quick lunch and eat a large dinner. The problem with this pattern is that energy is not being supplied when the body needs it, and then when the body is inactive, it's loaded up with calories. When calories aren't used they are converted to fat. 2. Adjusted Food Intake - This time, food intake has been adjusted to the activity curve. Furthermore, the nutritional breakdown is adjusted to avoid food cravings and to meet the protein requirements for an active person. The day starts with a breakfast that contains roughly 80% |

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| OH 11 | <p>carbohydrates and 20% proteins. The carbohydrates provide 2 to 3 hours of energy, after which blood sugar levels begin to dip and the body begins relying on the proteins. Since proteins take longer to digest and process, they kick in when the carbohydrates have been used.</p> <p>V. Basic keys to Healthful Eating</p> <p>A. Variety – There is no one magic food. Each food offers special nutrients. For example, oranges provide vitamin C and carbohydrates but not iron and protein.</p> <p>B. Moderation. – Even soda and chips, in moderation, can fit into a well-balanced diet. Simply balance out refined sugars and fats with nutrient-wise choices at your next meal. Although no one food is a junk food, too many nutrient poor selections can accumulate into a junk food diet.</p> <p>C. Wholesomeness. – Choose natural or lightly processed foods as often as possible. For example, choose whole wheat rather than white bread or baked potato rather than French fries. Natural foods usually have more nutritional value and fewer questionable additives.</p> |
| OH 12 | <p>VI. Ergogenic Aids</p> <p>A. For years athletes of all types have been looking for ways to improve performance – Ergogenic Aid</p> <p>B. Definition: An Ergogenic Aid is anything that will enhance work output.</p> |
| OH 13 LO 7 | <p>C. There are several types of Ergogenic Aids</p> <ol style="list-style-type: none"> 1. Mechanical or Biomechanical – Examples of mechanical aids might include special wheels on a bicycle. A biomechanical aid might be a specific type of training. 2. Mental – These aids include visualization, relaxation techniques and other psychological skills. 3. Pharmacological – These are usually drugs designed to function like hormones or neurotransmitter substances found in the body. Pharmacological ergogenics may enhance physical power by affecting various metabolic processes associated with sport success. Examples include Anabolic Steroids, amphetamines. |

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| <p>OH 17</p> <p>OH 18</p> | <ol style="list-style-type: none"> 3. Sports drinks will also enhance recovery if taken within 20 minutes after exercise. 4. The handout indicates there are several types of sports drinks on the market. It basically comes down to personal preference – taste. <p>D. Bars and Gels</p> <ol style="list-style-type: none"> 1. The purpose of bars and gels is to provide the body with a quick source of energy without gastric upset. 2. There are hundreds of different sports bars on the market these days. Some can be very expensive and still not provide the same benefits of a breakfast bar. Look for a sports bar that has more carbohydrates. This is the body primary source of energy. 3. The advantage of this type of bar is that they will not upset your stomach. In other words, if you can't tolerate breakfast, it might be a good idea to eat one of these sports bars. 4. Gels – Gels come in packets and usually contain about 100 calories of pure carbohydrates. They are designed to provide the body quick energy as they are readily absorbed by the body. 5. The best time to use Bars and Gels is <ol style="list-style-type: none"> a) Prior to exercise b) During exercise c) Most effective for exercise lasting more than 60 minutes. |
| <p>OH 19</p> | <p>VIII. Water – the essential element</p> <p>A. Water is the most essential of all elements it is needed for:</p> <ol style="list-style-type: none"> 1. Energy production 2. Temperature control of you body 3. If you do not drink enough, it will limit the amount of energy available for exercise and endurance |

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| OH 20 | <p>B. Drinking enough water is essential – a minimum of 8 to 12 glasses of water (8oz.)</p> <ol style="list-style-type: none"> 1. BRING A WATER BOTTLE 2. Drink often – thirst is not a good indicator. 3. If you are drinking enough water, your urine will be almost clear. 4. Cadet may drink during class. <p>IX. Vitamins and Other Supplements</p> <p>A. Multiple vitamins - recommendation: take a general multiple vitamin. Because we usually do not derive all of our nutrients from our food, a multiple vitamin will help supply the nutrients that are lacking in your diet. You DO NOT need to spend a lot of money. If you are taking in too many supplements, your urine will be neon yellow. That's where most of your vitamin money may be going.</p> <ol style="list-style-type: none"> 1. Vitamin B complex - B is considered the stress vitamin. Make sure your vitamin contains the RDA for vitamin B. 2. Vitamin C promotes healing. Taking an extra 500 mgs. will enhance the healing process. This is especially good during training. <p>B. Protein powders – They are OK if you are not taking in enough protein, or fail to take in enough calories. Otherwise, these are not needed.</p> <p>C. Herbs - These are dangerous and not regulated by the FDA.</p> <p>D. Other “Performance Enhancers” – are not recommended. They may affect blood pressure, ability to sleep, hydration, and endurance. Depending on the supplement, may also have an affect on drug testing.</p> |
| OH 21 LO 8 | <p>X. Alcohol and Exercise</p> <p>A. Alcohol is generally not considered a food. It provides little energy and plenty of calories – 7 calories per gram.</p> <p>B. Use Alcohol in moderation – If you are going to drink, do so wisely as alcohol will affect you in the following ways.</p> |

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| OH 22 | <ol style="list-style-type: none"> 1. Diuretic – alcohol tends to be dehydrating. For example, if you drink a beer after exercise, you’ll make frequent trips to the bathroom and lose, rather than replace valuable fluids. Drinking before exercises increases your chances of dehydration during the event. 2. Accentuates fatigue – If you drink before you exercise, you may end up on the sidelines due to poor performance, if not hypoglycemia. Pre-exercise alcohol can interfere with normal blood sugar control. Alcohol will also increase the production of lactic acid. 3. Operates as a depressant 4. Slows reaction, reflexes and coordination 5. Alcohol takes 12 hours to clear the system 6. Alcohol is high in calories and is a poor source of energy. <p>C. Social drinking - If you drink an occasional beer or wine for social reasons, drink plenty of water also. Then limit yourself to one or two and be sure to eat some carbohydrates.</p> <p>XI. Things to Remember</p> <ol style="list-style-type: none"> A. Decrease fat intake B. Minimize caffeine C. Do not skip meals – EAT D. Minimize alcohol intake E. Drink plenty of fluid |